

MAY 1988

(1) I 24.25L 8/5

ORIGINAL
COMPLETED

(2)

MANAGEMENT ASSUMPTIONS AND
SITE SUITABILITY ANALYSIS

for

(2A)

Kettle Falls Developed Area
Coulee Dam National Recreation Area
Washington

(6) Aug. 1989

(3)

Prescriptive Guidelines
for Review of Development Proposals

(5)

US Department of the Interior, National Park Service

Recommended: Gary Kuiper
Superintendent, Coulee Dam NRA

4-14-89

Approved: Charles H. Odegaard
Regional Director, Pacific Northwest Region

6-15-89

A

Management Assumptions and
Site Suitability Analysis
For
Kettle Falls Developed Area

Coulee Dam National Recreation Area, Washington

United States Department of the Interior/National Park Service

SUMMARY

At the request of Superintendent Gary Kuiper, Coulee Dam National Recreation Area (CODA), Denver Service Center (DSC), Pacific Northwest Region (PNRO), and CODA staffs attended a November 14 and 15, 1988 on-site meeting to review the concessioner's proposed marina expansion and recreation vehicle (RV) park plans for Kettle Falls. Attendee discussions resulted in two conclusions: first, a schedule conflict existed between the National Park Service (NPS) and concessioner in that the concessioner wanted approval to implement phase one of his marina expansion in FY 89 and the NPS was not in a position of knowing what kinds of development and facility capacities were appropriate; second, the Park Service needed to move quickly ahead and produce a potential use location plan taking into account the park's goals for Kettle Falls, the area's inherent resource values, the potential recreational activities, and existing site conditions.

The DSC planners facilitated a two-week (February 21-March 2, 1989) worksession with park and region staffs on-site at the Kettle Falls developed area. The intent for the worksession was threefold: first, to define clear, defensible management objectives based on the purpose and significance of the Kettle Falls developed area; second, determine appropriate types of recreational developments and design guidelines for the area; third, inventory and analyze individual sites within the developed area as to their suitability for various types of recreation developments.

Following the establishment of overall goals and management directions for the Kettle Falls developed area, four major types of recreational development -- marina, no-service RV/tent campground, large-group campground, and day use/swim beach -- were identified as suitable recreational facilities. Desirable site conditions and design guidelines were then identified for each type of development. Five specific sites -- NPS Campground, Entrance Road area, Lions Island, Locust Grove, and the Swim Beach/Ski Point -- within the Kettle Falls developed area were then analyzed to determine which sites were most suitable for the various types of recreational development.

Since all sites were suitable for more than one type of recreational development, NPS management prioritized site uses and developed a potential location concept that shows where each of the recreational uses would occur (see Potential Use Locations graphic). The recreational developments were located as follows -- NPS Campground, expand when necessary, as a no-service RV/tent campground; Entrance Road area, utilize as a support facility location for overflow parking, store/restaurant, or sewage disposal drainfield (needs testing); Lions Island, phase one marina expansion; Locust Grove, group campground (pending determination of National Register eligibility of old Kettle Falls townsite); Swim Beach, day use for small groups (move swimming to Colville Flats) and Ski Point, day use by reservation for large groups.

A full-service recreational vehicle park was identified as a development and activity that should occur outside of the Kettle Falls developed area. Due to limited developable area and protecting resource values, first priority will be directed toward the day use

and/or water dependent activities. As demand increases for RV type of overnight service, private developers should be encouraged to provide it outside the park.

National Park Service approval of the concessioner's phase one marina expansion could be issued with the following provisions: 1) all facilities will meet design guidelines prescribed in this report or new ones provided by region or park, 2) an economic feasibility analysis will be conducted to determine the project's feasibility, 3) feasibility of on-site sewage treatment versus off-site disposal will be determined prior to construction of any facility that requires sewage disposal, 4) environmental assessment/compliance will be paid for by concessioner, but accomplished by NPS, and 5) vehicular access to Lions Island will be located separately from the existing Locust Grove Access Road.

Determination of eligibility of the old Kettle Falls townsite for inclusion on the National Register of Historic Places is a key action before the NPS can decide the appropriate use for the Locust Grove site and the Swim Beach day use area. The NPS will have to decide on whether to move the group campground to the Swim Beach area and if so, then where to relocate the Swim Beach day use area. Also, the role of interpretation at the townsite will need to be defined.

A final important area on which to focus NPS management is Mission Point, an area that encompasses the Kettle Falls Archeological District. The Park Service needs to determine and take action regarding interpretation opportunities and possible coordination with other interested groups and agencies.

CONTENTS

NEED FOR PLANNING	1
BACKGROUND	3
THE PROCESS: MANAGEMENT ASSUMPTIONS	5
KETTLE FALLS AREA DESCRIPTION	11
MAJOR TYPES OF DEVELOPMENT	23
SITE CONDITIONS INVENTORY	31
SITE SUITABILITY ANALYSIS	47
POTENTIAL USE LOCATIONS AND RECOMMENDATIONS	53
COMPLIANCE	59
LIST OF PREPARERS	60

GRAPHICS

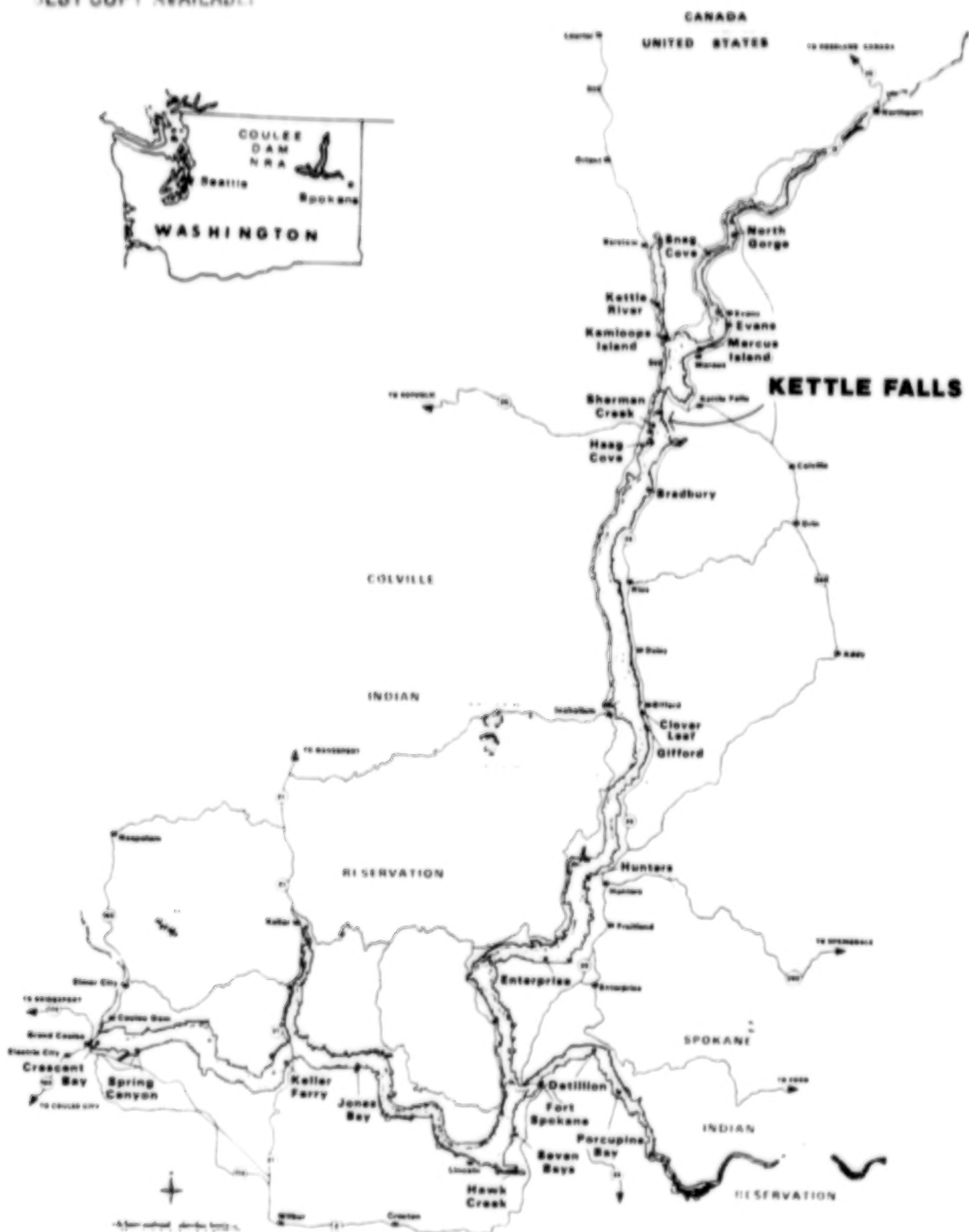
LOCATION MAP	2
EXISTING CONDITIONS	13
CONCESSIONER'S PLAN	29
DEVELOPED AREA SITES	33
SITE SUITABILITY	51
GENERAL MANAGEMENT PLAN PROPOSAL	55
POTENTIAL USE LOCATIONS	57

NEED FOR PLANNING

A two-week worksession -- February 21 - March 2, 1989 -- and this proceedings report resulted from a request in November 1988 by Superintendent Kuiper, CODA, for the DSC to review the concessioner's proposed development scheme for marina expansion and construction of a full-service RV campground on Lions Island at the Kettle Falls developed area. The plan is ambitious in maximizing both financial return to the concessioner and use of the remaining developable land and water resources available on and around Lions Island. Concessioner plans at this point are schematic only and are not supported by detailed design, engineering, or economic analyses.

The November 14 and 15, 1988, on-site plan review with DSC, park, and regional staffs resulted in two conclusions: first, a schedule conflict existed between the NPS and concessioner in that the concessioner wanted approval to implement phase one of his marina expansion and the NPS was not in a position of knowing what development facilities and capacities were appropriate; second, the Park Service needed to move quickly ahead and produce a conceptual site use plan taking into account the park's goals for Kettle Falls, the area's inherent resource values, the potential recreational activities, and the existing and projected visitor use demands for water- and land-oriented activities.

The General Management Plan (GMP) for CODA was approved in July 1980. While the 1980 GMP provided direction for expanding concession facilities in the national recreation area (NRA) and proposed some specific facility actions for the Kettle Falls site, it did not prescribe a direction in which NPS management should be moving. Present and future development proposals need to be evaluated against a set of site objectives or management assumptions to determine their appropriateness. This could not be done based on the direction set in the GMP. It is now appropriate to carry planning to a greater level of detail. The purpose, then, of this report is to record a framework for evaluating present and future site-specific project planning and design proposals at the Kettle Falls development area in the Kettle Falls District. The framework was developed around a series of worksession steps -- developing site management assumptions, defining major types of development and design guidelines, inventorying on-site conditions, analyzing site suitability for recreation, identifying potential use locations and making recommendations. The results of these steps are described in the following sections of this report.



COULEE DAM NATIONAL RECREATION AREA

609 45,013
OSC 1 JULY 1979

BACKGROUND

The completion of Grand Coulee Dam in northeastern Washington State by the Bureau of Reclamation in the 1940s resulted in the creation of 130-mile-long Lake Roosevelt. In 1946 an agreement was signed between three agencies within the US Department of the Interior -- the Bureau of Reclamation, the National Park Service, and the Bureau of Indian Affairs -- that authorized the NPS to administer recreation on Lake Roosevelt. The National Park Service-managed area is called Coulee Dam National Recreation Area (NRA).

There is no site-specific congressional act or presidential proclamation establishing Coulee Dam NRA. The following documents serve as the primary guides in administering the area and applying NPS policies:

Tri-Party Agreement between the Bureau of Reclamation, National Park Service, and Bureau of Indian Affairs, actuated on December 18, 1946.

RCW 37.04.020 with 40 USC 255, that together function to establish the kinds of jurisdiction exercised by the Federal Government at CODA. Reservoir lands acquired before October 19, 1940, are subject to concurrent jurisdiction; those since, to proprietary.

Solicitor's Opinion, 84 ID 72, issued February 2, 1974, regarding Native American jurisdiction within Spokane and Colville Reservations which nullified the Tri-Party Agreement and directed a new agreement. This has not been accomplished because status of the Indian Zone is enmeshed in the larger issue of Native American rights and claims against the Government resulting from the construction of the dam and subsequent federal projects.

The purpose for Coulee Dam NRA is alluded to in the Tri-Party Agreement which states that Lake Roosevelt and adjacent lands "...offer unusual opportunities through sound planning, development, and management for health, social, and economic gains for the people of the nation." Executive Order 11017 of April 27, 1962, established a Recreation Advisory Council to coordinate policy regarding outdoor recreation. The council's policy, Circular No. 1, declared that national recreation areas should be areas "...offering a quality recreation experience...outdoor recreation use is the dominant or primary purpose."

The National Park Service manages the 130-mile-long recreation area in three administrative districts -- the Coulee Dam District, lower Lake Roosevelt between river miles 0-37; the Fort Spokane District, Spokane River arm between river miles 37-80; and the Kettle Falls District, upper Lake Roosevelt between river miles 80-130. Within the three districts, there are 34 recreational use sites on the lake that provide for camping, picnicking, swimming, boating, sight-seeing, and various educational activities.

In addition, five privately-operated concessions oriented toward providing marine services have been authorized under four concession permits and one concession contract.

Two areas in the park have been determined to be of national historical significance - Fort Spokane and the Kettle Falls Archeological District. Fort Spokane was established in 1880 at the confluence of the Columbia and Spokane Rivers, a location that afforded protection for the communities to the south, the settlers in the Colville and Okanogan Valleys, and the Native Americans on the Colville and Spokane Reservations. Four original buildings remain on the old fort grounds.

The Kettle Falls Archeological District includes Kettle Falls, the second most important prehistoric and historic Native American salmon fishing ground on the Columbia, now submerged by Lake Roosevelt; exceptionally high concentrations of prehistoric cultural remains spanning a 9,000 year period; Fort Colville, second largest Hudson Bay Company trading post in the Pacific Northwest, also submerged by the lake; and St. Paul's Mission, a partly original, partly restored log church originally constructed by Jesuit priests in 1845.

Lions Island also has important archeological sites including pit house remains that have been evaluated by a contract archeologist and the Pacific Northwest Regional Archeologist who recommended that the site be nominated to the National Register of Historic Places.

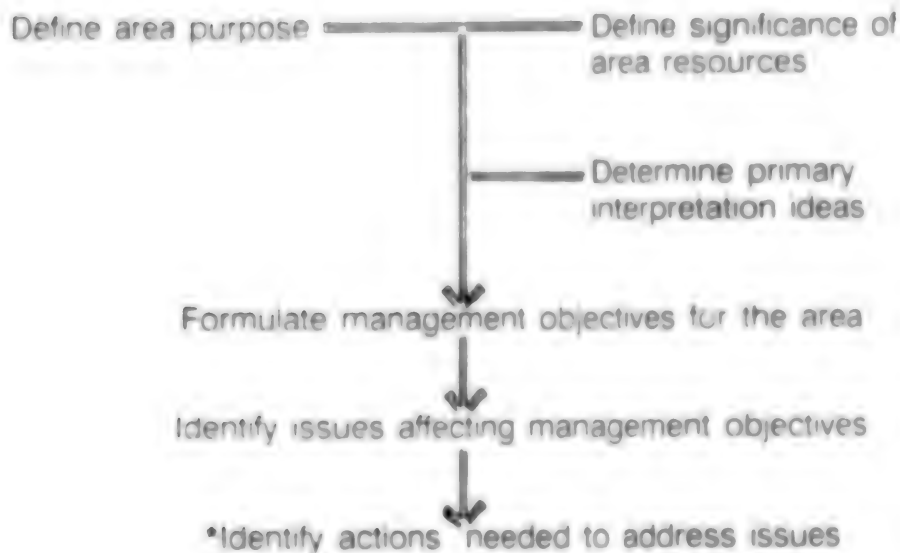
Cultural remains of the former Kettle Falls townsite location also need to be evaluated as to their significance and eligibility for the National Register.

Outstanding scenic rural and forested mountain landscapes are a recreational attraction that complements lake boating and fishing, picnicking, and camping.

THE PROCESS: MANAGEMENT ASSUMPTIONS

The diagram below describes the process used to define a future direction for the Kettle Falls developed area. Area purpose is defined as the primary reason (or reasons) for the area's development as a marina recreation developed area. Purposes are based on the NRA's recreational mandate, visitor use, management history, and site recreational values. Purposes are used to set management priorities. Resource significance is based on those natural and cultural values inherent on-site and from the NRA's recreational values. This significance helps determine the primary visitor experience and is used to identify visitor use and interpretation idea priorities. Management objectives describe primary goals for management and area development that ensure accomplishment of the area purpose.

PROCESS MODEL



*The actions needed to address specific issues for Kettle Falls will be developed and considered in subsequent planning and design projects. Specific actions are not included in this report but rather a general scenario matching development types with suitable sites.

Area Purpose

The following purposes were identified for the Kettle Falls developed area:

Provide for the general public, water-oriented recreational use of Franklin D. Roosevelt Lake and land-based recreational use of its publicly owned shorelands.

Conserve and interpret outstanding natural, scenic, and cultural values.

Area Significance

The following statements summarize the significance of resources at Kettle Falls:

Open space, flat topographic relief, and deep water make the Kettle Falls recreation area the outstanding site for water-oriented and land-based recreational facilities within the management District.

Lake Roosevelt within the Kettle Falls District is a top rainbow trout fishery in Washington State.

Kettle Falls Archeological District contains important historic and prehistoric cultural remains spanning a 9,000 year period related to Native American salmon fishing grounds, Fort Colville, a Hudson Bay Company trading post, and St. Paul's Mission constructed by the Jesuits.

Kettle Falls developed area contains cultural remains of the Kettle Falls townsite, relocated as a part of the impact mitigation for Grand Coulee Dam construction and lake impoundment.

Lions Island contains important prehistoric cultural remains of pit houses dating to about 1000 years ago.

Kettle Falls developed area is the primary focus for public lake access and a concession marina in the upper part of Lake Roosevelt.

The Kettle Falls developed area's proximity to the intersection of three cross-state highways and the Kettle Falls and Colville communities makes the site an outstanding geographic location to facilitate regional water-oriented recreation.

Primary Interpretation Ideas

The following primary interpretation ideas were developed for the Kettle Falls developed area from the significance statements.

In order to successfully use and enjoy area recreational resources and facilities, visitors to the Kettle Falls area require information about fishing and hunting regulations, boating and water safety, and orientation to recreational opportunities.

The Kettle Falls developed area represents a 9,000 year continuum of site use for community life, fishing, commerce, social gatherings, and recreation.

- Prehistoric and historic Native American subsistence salmon fishing
- Hudson Bay Company commercial use of natural resources
- Impacts of damming the Columbia River, including submersion of prehistoric sites and relocation of historic communities
- Recreation and scenery in the Kettle Falls District

Management Objectives

From the area purpose, significance, and general visitor experiences, a series of management objectives was formulated for the Kettle Falls developed area. These management objectives represent goals that NPS management will work toward:

Concentrate visitor use and recreational development at specified development use zones to minimize disturbance to natural, rural, cultural, and scenic lakeshore resources and private property.

Encourage visitors to experience a full range of outdoor recreational activities such as boating, fishing, swimming, water skiing, sightseeing, picnicking, active play, and camping.

Develop an interrelated system of water- and land-based recreation facilities that allow visitors to experience area resources to the extent that recreational, natural, cultural, and scenic values are not impaired.

Continue to improve the rainbow trout fishery.

In cooperation with others, maintain water quality to meet state standards that allow for primary human contact

Encourage concessioner-provided services and facilities related to water-dependent recreation at Kettle Falls when they are economically feasible, site-suitable, and necessary for appropriate public recreation

Encourage visitors to learn about the developed area's natural and cultural resource values

Issues

The following issues were identified and need to be addressed to achieve the management objectives established for the Kettle Falls developed area:

On peak-use days, parking areas for car and boat trailer units are filled to overflowing. Expansion of the marina is limited until additional parking can be provided.

Physical limits of the embayment and pool level fluctuations constrain moorage capacities, maneuvering space for houseboats during fueling, and circulation. Fluctuations in pool elevation limit the number of days the swim beach is useable.

Increasing the number of boats launched per day is limited by congestion at the boat launch, overflow parking along both sides of the access road, and temporary parking after pulling boat out to unload, wash, and fasten down.

There are conflicting proposals for the embayment -- swimming (1980 GMP) and concession rental moorage (1988 concession plan).

Physical limits of embayment entrance are minimally adequate for houseboat ingress and egress.

Existing road layout directs all traffic to Lions Island through Locust Grove and, without a new road location, separation of uses and traffic are precluded.

Lack of pumpout facilities for boat sewage may affect water quality.

Existing parking spaces at campground sites are not adequate to accommodate the number of vehicles brought by individual campers.

Large groups often monopolize current day-use facilities to the exclusion of the more typical smaller family groups.

The only trail that connects the developed sites discourages pedestrian circulation because of its length which increases vehicle traffic to and from the various sites.

There is a lack of engineering studies to determine suitable and feasible locations for on-site sewage disposal -- high ground water and proximity to lake.

There is a lack of engineering, marketing, and visitor use studies to support suitable and feasible development.

There is a lack of design data including wave height, wind fetch, and hydrodynamics for marina development along the unprotected lake shoreline of Lions Island.

The potential for interpretation and/or preservation of old Kettle Falls townsite resources has not been determined.

Information that is being made available to visitors is insufficient to address water and boating safety, fishing regulations, and recreational opportunity issues.

The Kettle Falls Archeological District is not adequately interpreted on-site. Many of the district's resources are submerged under Lake Roosevelt and they are not visually or physically accessible most of the time.

Any proposed action, whether it is a visitor use/interpretation, natural or cultural resource management, or facility construction-related proposal, must be consistent with the established management assumptions. Management assumptions provide the means for directing decision-making by defining limits, i.e. a proposed action is appropriate only if it helps to meet one or more of the management objectives and is consistent with park significance and purpose. If a proposal is desired that does not meet the assumptions test then the assumptions must be reexamined and revised or the action should be dismissed.

BLANK PAGE

KETTLE FALLS AREA DESCRIPTION

As the district headquarters, the Kettle Falls developed area is the focal point for most of the NPS activities for the northern reaches of Lake Roosevelt. It has served as a concession developed area for the past 20 years, although in a limited fashion, i.e., boat gas, boat docks, and retail sales for ice and snacks.

The area is served by three major cross-state highways: east/west State Route 20 from Idaho to Okanogan and west; north/south US Highway 395 from Canada to Spokane and south; and north/south State Route 25 from Canada to Davenport. All three intersect within a mile of the marina site. There is no other commercial marina service on the north end of Lake Roosevelt, the nearest facility is located 65 miles downlake at Seven Bays.

The developed area as referred to in this report extends from Ski Point 1.5 miles northward to the NPS campground and 2.5 miles north from the campground to the Mission Point area, just north of US Highway 395. Available recreational facilities include a 76-site campground, a boat launching ramp, a limited number of rental slips, parking for 59 cars with boat trailers in two lots and 32 single vehicles, a 120-person group campground, and a day use/swim beach area (See photographs on pages 15 and 17 and Existing Condition graphic).

Visitor Use Trends

Total annual visits to Coulee Dam NRA as a whole have increased from 510,300 to 1,384,300, more than 171%, since 1985. The total number of boat launches has increased from 19,000 in 1985 to 51,400 in 1988. The total number of campers has increased more than 160% since 1985.

Regional and local visitors account for the majority of Kettle Falls users. Recreational vehicle campers outnumbered tent campers by almost 4.5 to 1 at Kettle Falls in 1988. Most campers stay for only a weekend, rather than longer periods. Several families often occupy adjacent sites in the campground. The campground is full on summer weekends between 4th of July and Labor Day. The group campground at Locust Grove receives heavy use for gatherings such as family reunions and company picnics, and is booked months in advance for summer weekends. Large groups of more than 50 persons tend to monopolize present day use facilities.

Fishing and power boating are the predominant uses of the lake. According to the GMP, more than 80% of the boaters are power boaters.

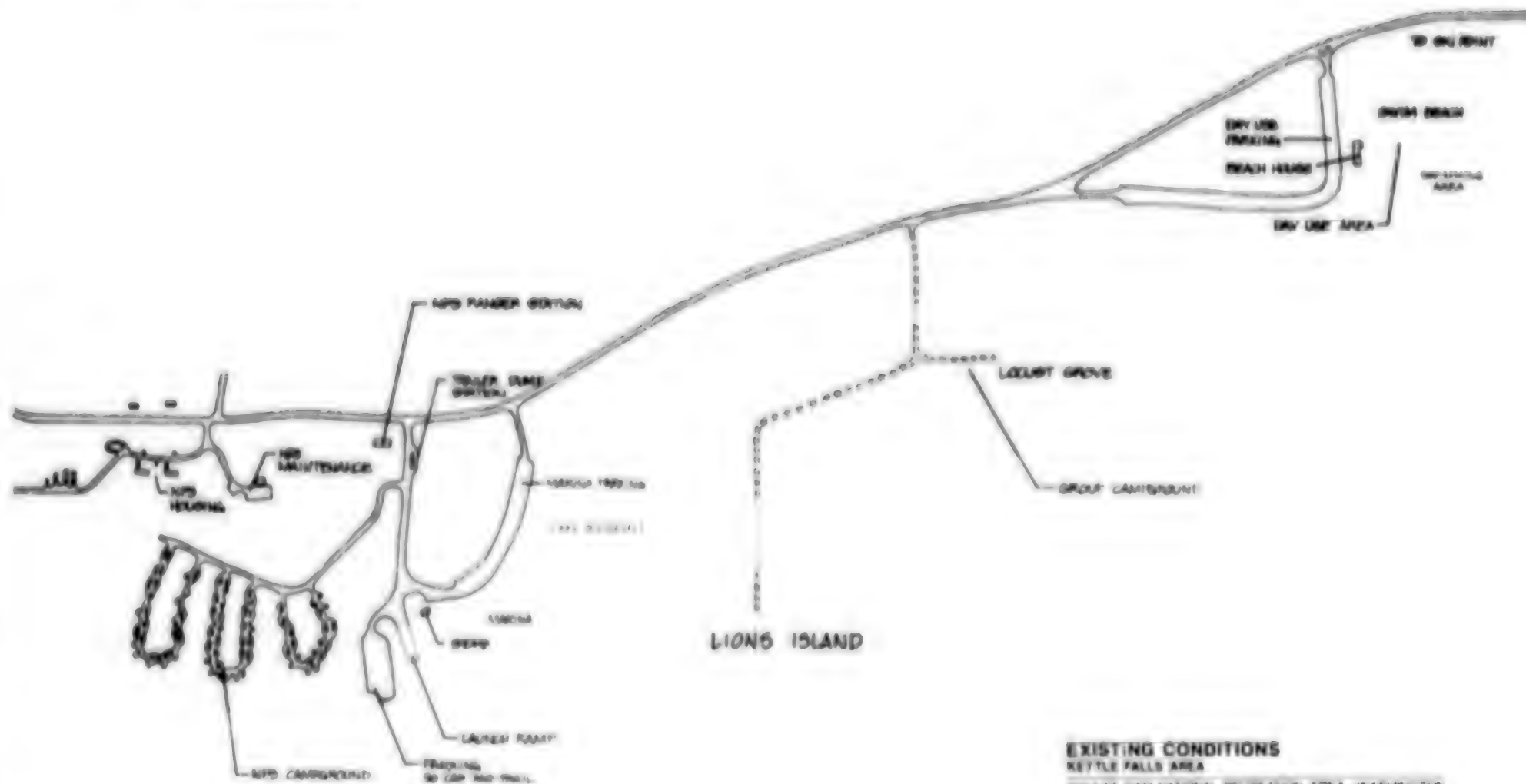
According to the GMP, facilities perceived as necessary by visitors include restrooms, swim beaches, campgrounds, picnic areas, showers, signs/information, boat fuel, and playground facilities. Services that are preferred but not required include water ski areas, moorage, marine repair and supply services, boat trailer parking, RV hookups,

and boat rentals. In general, visitors were opposed to developments such as restaurants and lodging facilities. Visitors perceived facilities and services (which existed in 1978 when the survey was made) as adequate except for the lack of showers. This survey is ten years old and the conclusions may not still be valid considering the increase in use of the national recreation area.

KETTLE FALLS 1988 VISITATION

	<u>Traffic Counts</u>	<u>Tents</u>	<u>RV's</u>	<u>Organized Group</u>	<u>Rec. Visits</u>
Jan.	327	4	6	0	1,145
Feb.	1,321	0	7	0	4,624
Mar.	5,562	10	14	0	19,467
Apr.	9,148	7	33	0	32,018
May	12,885	17	405	178	45,098
June	10,986	164	697	985	38,451
July	22,327	432	1,355	2,047	78,145
Aug.	26,141	277	1,019	510	91,494
Sep.	13,798	39	457	1,907	48,293
Oct.	6,297	10	311	2,300	22,040
Nov.	1,006	5	29	0	3,521
Dec.	2,413	0	6	0	8,446
TOTAL	112,211	965	4,339	7,927	392,742

BEST COPY AVAILABLE



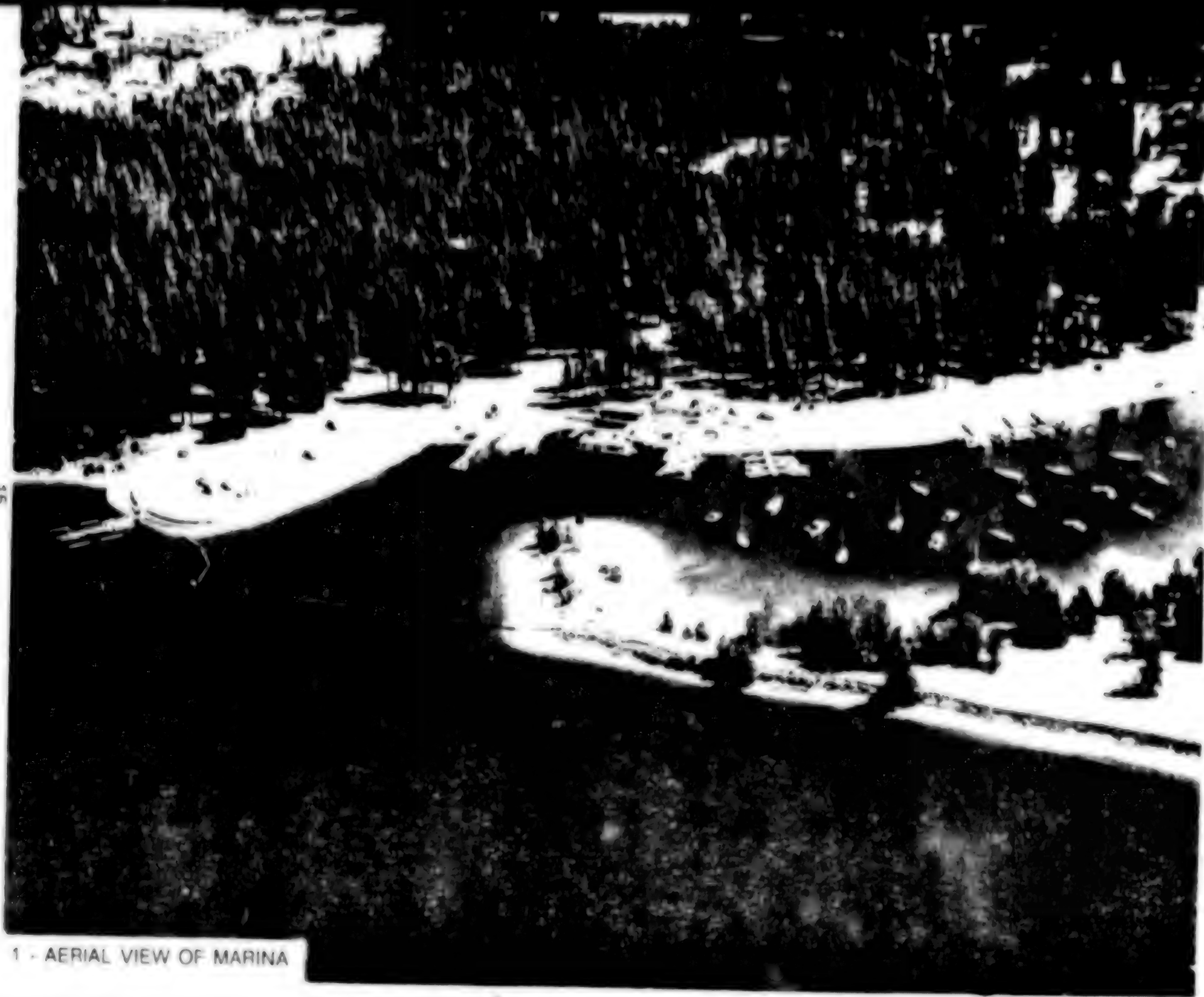
EXISTING CONDITIONS KEYTLE FALLS AREA

COLLEGE OF NURSING, UNIVERSITY OF CALIFORNIA, SAN FRANCISCO, CALIF.



BLANK PAGE

15



1 - AERIAL VIEW OF MARINA

15

BEST COPY AVAILABLE

BLANK PAGE



2 - AERIAL VIEW OF DEVELOPED AREA
FROM SWIM BEACH TO MARINA

BEST COPY AVAILABLE

BLANK PAGE

An analysis of the marina market in northeastern Washington done by the DSC Concessions Branch in 1987 indicated that most boaters trailered their boats and preferred to re trailer them in the evening rather than leave them in the water. That analysis also indicated that visitors from western Washington who used state park lakes in eastern Washington trailer their boats; hence, there is little demand for long term moorage or storage at state park lakes. State park officials expressed an opinion that moorage at Lake Roosevelt could be a big draw because Lake Roosevelt attracts bigger boats, which people are less likely to trailer back and forth. The analysis recommended that any concessioner proposal for houseboat rentals be carefully considered, since the houseboat market in the Pacific Northwest is virtually untapped and its potential unknown.

Utilities

Electrical and telephone services are available at the site. Extension of these lines will be necessary to provide service to any new facilities. All new services would be underground construction.

The city water system that serves the town of Kettle Falls also serves the NPS facilities. A new 6-inch water line is available on site for any new facilities. Water meters would be installed at each new facility to monitor water usage.

Currently there is no community sewer system available to the Kettle Falls development area. Separate septic tank and absorption fields have been used in the past for individual facilities. High water table and proximity of the lake to new development may preclude any new similar systems because of current regulations. Therefore, it is recommended that a central sewage disposal system utilizing stabilization ponds be evaluated for any new development. If a subsurface soil disposal system is used, a force main will be necessary to pump the sewage or septic tank effluent to a suitable disposal site. Any proposed sewage disposal system would be reviewed and approved by the Washington State Department of Ecology.

Fire Protection

Fire protection for the Kettle Falls development area is provided by the Kettle Falls Volunteer Fire Department under a cooperative agreement with the NPS. Fire hydrants would be installed at any new facilities to accommodate the fire department equipment.

Hydrology

Lake Roosevelt is at elevation 1290' at full pool. Minimum allowable elevation of the water level is 1208' before additional management strategies are implemented. There is an annual drawdown from January to April of up to 82 vertical feet, exposing vast

expanses of sand or steeply eroding banks. The lake does not normally reach full pool again until July. The lake is generally stable at 1285' pool level during the summer. The Kettle Falls launching ramp is useful at lake levels down to 1236' pool level. The water quality of the lake itself is exceptionally high.

Soils, Topography, and Climate

The soils in the Kettle Falls developed area are silty and sandy loams with coarser interbedded layers of Pleistocene glacial outwash material (US Soil Conservation Service Springdale-Marble soil classification) characterized by rapid permeability and excessive drainage. Problems associated with the soils are erosion, particularly along the lakeshore, and a sandy or gravelly profile which drains too fast for sewage leaching fields.

The topography is generally flat, excepting the lakeshore near the NPS campground, which is very steep with an abrupt dropoff into the lake. From the east shore of Lions Island inland across Locust Grove to the access road and south to the Swim Beach/Ski Point, there are shallow drainage channels that fill with water at high pool.

The Kettle Falls developed area has cold, wet winters and hot, dry summers. Most precipitation falls during the winter. The prevailing winds are from the south or southwest. Shade is highly desirable in the summer because of the temperature.

Vegetation

The predominant vegetation over most of the Kettle Falls developed area is ponderosa pine forest with a low shrubby understory. Understory species include snowberry, serviceberry, and Oregon grape. Both the NPS Campground and Entrance Road area have a relatively dense overstory of ponderosa pine and sparse understory. Lions Island has a sparse tree cover of scattered small ponderosa pines with some shrubby willow and alder, and a ground cover of gooseberry and grasses. Locust Grove has large patches of deciduous trees, primarily naturalized black locust, with other patches of mixed deciduous and coniferous trees. There is an irrigated lawn area in the group campground. The Swim Beach/Ski Point area also has an extensive irrigated lawn with a variety of planted deciduous shade trees (native and exotic) and occasional conifers. There are scattered patches of lilac bushes throughout Locust Grove and the day use areas.

When the drainage channels between Lions Island, Locust Grove, and the swim beach/Ski Point fill with water at high pool, seasonal wetlands dominated by emergent grasses are formed.

Wildlife

Common terrestrial mammals include whitetail and mule deer, striped skunks, ground squirrels, chickadees, chipmunks, various bats, and cottontail rabbits. Common birds are osprey, redtailed hawks, great blue herons, killdeer, great horned owls, woodpeckers, flickers, flycatchers, ravens, nuthatches, red-winged blackbirds, rufous-sided towhees, and dark-eyed juncos. Migratory waterfowl are common in fall and spring. The seasonal wetlands that form at high pool in the drainage channels and the patches of trees on Locust Grove and Lions Island are used by a variety of nesting birds.

The lake supports a number of fish species. Rainbow trout have become the most important game fish in recent years. Net pens for raising rainbow trout have been installed near the Kettle Falls boat ramp, and are a popular visitor attraction. Walleye was the most popular game fish in past years, but the fishery has since declined. Perch and white sturgeon are other important game fish.

Threatened, Endangered and Sensitive Species

There are no listed, proposed, or candidate threatened or endangered plant species known to occur in the Kettle Falls developed area.

Two state-listed sensitive plants occur in the Kettle Falls developed area. Nuttall's pussytoes (*Antennaria parvifolia*) occurs in Section 23 of Range 37E, Township 36N. The least bladderly milk vetch (*Astragalus microcystis*) occurs in Section 26 of Range 37E, Township 36N. Sensitive plants are those whose populations are vulnerable or declining and could become endangered or threatened without active management or removal of threats. Prior to final design of planned facilities, the proposed sites should be searched for these species. Populations which might exist should be avoided if possible. If plants will be unavoidably disturbed, consultation with the Washington State Department of Natural Resources will be necessary to develop mitigating measures.

There are no known listed, proposed, or candidate threatened or endangered animal species which permanently inhabit the Kettle Falls area. Bald eagles, listed as threatened in this portion of their range, occur in the area primarily during the winter. There are known nest sites in the vicinity but they are not within the developed area.

Cultural Resources

The Kettle Falls Archeological District is listed on the National Register of Historic Places; it contains 18 prehistoric sites and two historic sites, Fort Colville and St. Paul's Mission.

Fort Colville, located northeast of Kettle Falls itself, was built in 1825 by the Hudson Bay Company as a fur trading post. By the 1830s, it included a store, dwellings, sawpit,

windmill, barn, and gristmill. The largest Hudson Bay post between the Cascades and the Rocky Mountains, the Fort functioned as the main source of supplies throughout the district, which encompassed the entire Columbia River watershed above the present Grand Coulee Dam. The Fort Colville district reached its peak in the 1830s and '40s. The Fort was abandoned by the Company in 1871 as business declined. A Company employee and his family continued to reside there until 1907. All the remaining buildings burned in 1910. The site was inundated by Lake Roosevelt in the early 1940s.

St. Paul's Mission was constructed by Catholic Jesuit missionaries overlooking Kettle Falls to the northeast in the vicinity of Native American campgrounds and burials grounds dating from around 600 A.D. A small structure of rough logs and brush built in 1845 was replaced by a square log chapel and residence in 1847. The mission was closed from 1858-62; it was reopened and used periodically during the summer salmon runs during the 1870s and '80s, after which it fell into disrepair. It burned in 1910. An accurate replica of the church was constructed in 1939. In 1951, the Catholic Church donated it to the state of Washington, which in turn donated it to the NPS in 1974.

A complex of 18 prehistoric sites comprise the Kettle Falls Archeological District. The sites cluster around the falls, and are to be found both above and below the normal pool level. Some are as old as 9000 years. Most indicate that prehistoric peoples were exploiting the salmon fisheries at the falls. The sites range from summer houses to permanent village locations to weirs and structures associated with salmon fishing.

There are three previously identified archeological sites on Lions Island. The largest and most extensive (45-ST-23) is known as the Lions Island Site. The site contains nine or ten pit houses dating to about 1000 years ago. It has suffered serious erosion from the wave action along the river side, and is currently being studied by the National Park Service and Bureau of Reclamation for a stabilization project. The Pacific Northwest Regional Archeologist concurs with the contract archeologist who evaluated the site in the latter's recommendation that the Lions Island Site be nominated to the National Register of Historic Places; therefore, it will be treated as if it were so listed. Any proposed development activities in the vicinity of the site will be designed to avoid impacts to the site; if it is not feasible to do so, mitigation actions will be developed in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation.

Two other, smaller and more disturbed sites are also located on Lions Island. One has suffered considerable disturbance from Bureau of Reclamation activities; the other is deflated and has lost much of its stratigraphic associations. Both should be preserved if possible.

MAJOR TYPES OF DEVELOPMENT

As the major lake access point for upper Lake Roosevelt, there have been a growing number of requests to provide commercial retail services such as rental docks and other retail sales and equipment rental in the Kettle Falls developed area.

As public use of the lake continues to increase, the existing Kettle Falls facilities will prove to be less than adequate, particularly for boat launching and parking. The existing embayment has been enlarged but has since proved to be too small as more visitors use it.

Several nearby community groups are urging the NPS to allow community-owned docks and moorage. If allowed, such use would soon preempt the present unrestricted use of embayments and quiet areas by the general public. There are also requests from the growing number of recreational vehicle campers for provision of campsites with full-service hookups.

The visitor demand for more services and facilities appears to be making it more economically feasible for the concessioner to expand his operation. Various phased concession developments (see Concession Plan graphic) have been offered by the concessioner as follows:

- Phase One
 - marina, 132 boat capacity
 - roadway and drainage structure
 - marina in lake, 49 boat capacity
 - log boom
 - buoy field, 49 boat capacity
- Phase Two
 - marina parking, 166 spaces
 - long-term parking, 47 spaces
 - RV park, 127 spaces with full-service hookups
 - swim beach
- Phase Three
 - restaurant

While this report does not substantiate the visitor demands or economic feasibility for concession expansion, it does acknowledge as appropriate four major types of development facilities for the developed area including a marina, a no-service RV and tent campground, a large-group campground, and a day use/swim beach area. With the exception of a full-service RV campground, the other types of recreational facilities already exist within the Kettle Falls developed area. At this time a full-service RV campground is not seen as a necessary type of recreation facility for the Kettle Falls developed area. Therefore, it was not included in the site conditions or design guidelines discussions in this plan.

Even though the concessioner has only expressed an interest in expanding marina-

related facilities and developing a full-service RV campground, this report will consider and give guidance on siting and designing four types of facilities. This is being done because each of the existing facilities has site issues related to it that could cause NPS management to consider moving it from its present location.

One reason for preparing this report is to evaluate sites within the Kettle Falls developed area to determine their suitability for one or more of the major types of recreational facilities. Management can then make informed decisions on facility locations whether projects are initiated by the concessioner or the NPS.

So that specific sites could be evaluated, the required site conditions and design guidelines for each type of recreational facility are described as follows:

MARINA

Functions

- launching ramp usable at low pool
- courtesy dock
- maintenance service dock
- fuel dock
- houseboat loading dock
- houseboat rental office/restroom
- houseboat sewage pumpout facilities
- houseboat dry storage
- rental slips
- store/food service/restroom
- buoy field/log booms
- long-term parking (houseboat customers)
- short-term parking (day use)

Desirable Site Conditions

- navigable water
- moorage area protected from wind and wave action
- low pool accessibility for boat launching
- shoreline slope: 12% minimum, 16% maximum (depending on soil type)

Design Guidelines

Water Based

- channel entrance: minimum water depth 4 feet at lowest expected water level; water width: 60 feet or 4 times beam of widest boat in marina
- channel interior: 75 feet minimum
- launching ramp usable to low pool elevation (1235')
- courtesy dock within 300 feet of launch ramp
- rental slips: floating, 75 per acre
- buoy field: minimum 60 feet between buoys
- fueling dock: near channel entrance side of marina
- pump-out facility: located adjacent to houseboat dock and away

- from other docks
- houseboat dock/rental office/restroom separate from present interior channel
- adequate parking to support the desired level of water based activities/use

Land Based

- store/food service: within walking distance from rental slips, courtesy dock, and houseboat dock
- maintenance/service dock: near launching ramp
- houseboat dry storage
- parking: boat trailer parking preferably within 600 feet of ramp with 175 launches/weekend day and 25 spaces/40 launches then 110 spaces are needed
- restrooms: 1 water closet/urinal per 15 berths, and within 1000 feet of any slip

DAY USE/SWIM BEACH AREA

Functions

- warm water swim area
- sand beach play area
- swim platform connected to shore
- turf grass sunbathing area
- children's playground
- large active play area
- picnicking areas
- picnic shelters
- parking area
- restroom/changing area
- limited food service

Desirable Site Conditions

- flat topography
- access to water
- overstory for shade
- sandy material for beach
- adequate water circulation
- warm water
- available pool elevation 1270'-1290'
- turf areas

Design Guidelines

- food service, changing area, and comfort station within 300 feet of beach
- 8 water closets/urinals per 200 people
- parking: 70 car and 10 bus/RV spaces

- swim dock
- 3 group shelters with 10 - 25 people per shelter
- 3 acres of open active play area
- children's play area (modular timber construction)

NO SERVICE RV AND TENT CAMPGROUND

Functions

- individual sites
- multi-vehicle sites
- dump station
- comfort station(s)
- amphitheater with limited parking

Desirable Site Conditions

- flat topography
- overstory for shade
- understory for screening
- lake views
- lake access swimming
- well-drained soils
- eastern exposure

Design Guidelines

- comfort station within 300 feet of campsites
- 4 water closets/urinal per 20 sites
- amphitheater with walking distance
- day use area, water information station, and store within walking distance
- 5 sites per acre
- 30% of total sites to be multi-vehicle sites
- proximity to boat launching ramp

LARGE GROUP CAMPGROUND

Functions

- parking areas
- picnic shelter
- comfort station
- water and power hookups

Desirable Site Conditions

- flat topography
- open space for active play
- overstory for shade
- well-drained soil

Design Guidelines

- separate from individual campsites
- active play areas
- 4 group sites with 50 - 75 people per site
- 1 electric and water outlet per group site
- 1 comfort station with 4 water closets per group site
- 1 picnic shelter per group site
- 20 cars and 10 RV/bus parking spaces per group site

GENERAL DESIGN GUIDELINES - ALL SITES *

Architectural Theme

- needs to be developed parkwide with particular style suited to specific developed areas

Vegetation

- integrate existing native vegetation into design
- use to break up scale/mass of development

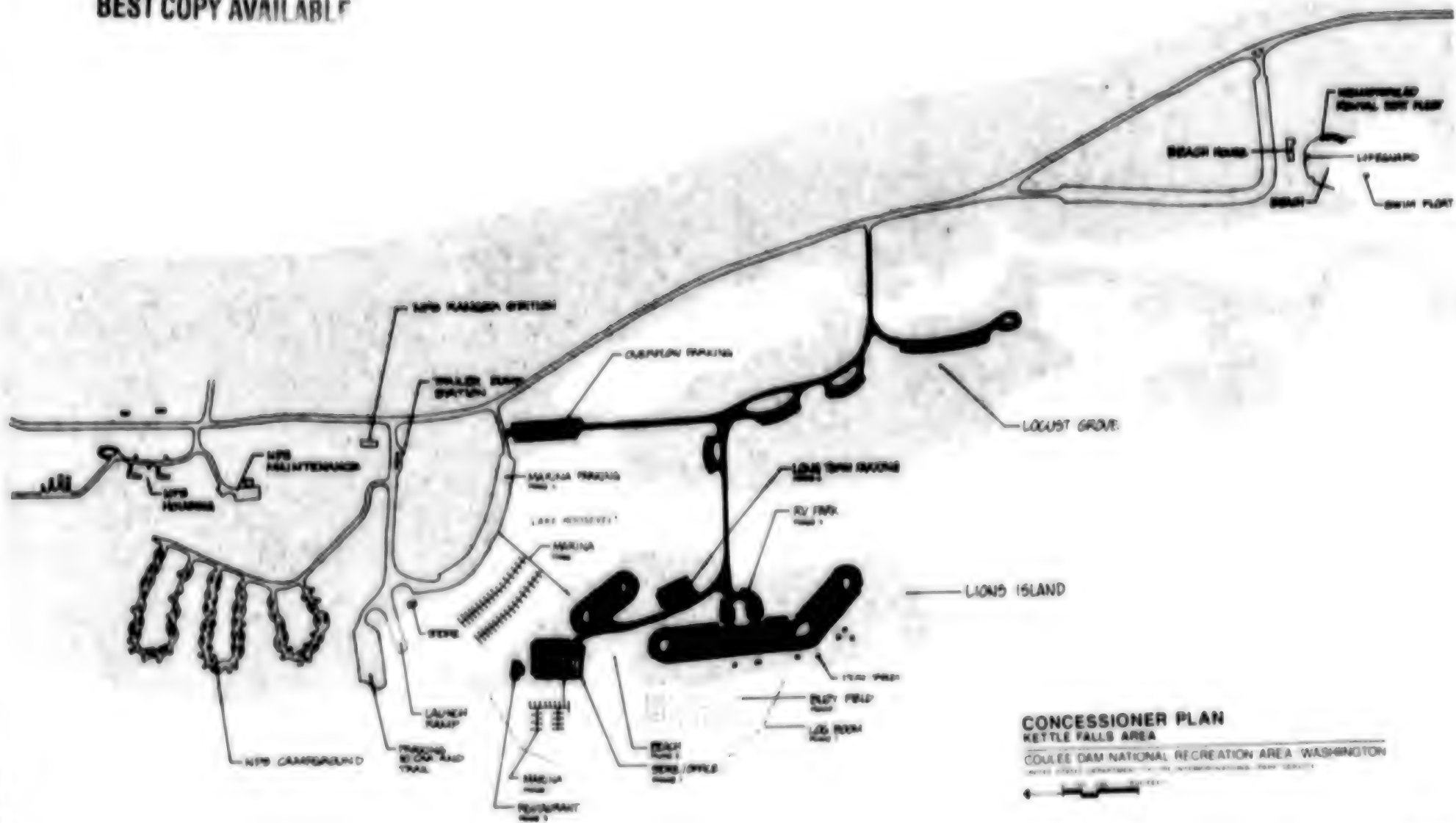
Grading

- blend landform into existing topography
- grade into gradual rather than abrupt angles

- * This section needs to be expanded by region and park as necessary

SCENE 1

BEST COPY AVAILABLE



BLANK PAGE

SITE CONDITIONS INVENTORY

The site conditions inventory involved conducting a reconnaissance survey of the Kettle Falls developed area to map on-site environmental patterns and to verify information presented in management, planning, and design reports. Two types of information were gathered -- 1) site opportunities and constraints, and 2) environmental patterns -- that helped in understanding the area as an interactive system. To better understand and depict the area, a base map and site inventory overlay were prepared. The inventory overlay enables the planner to interpret the pattern and distribution of site conditions and to direct the site suitability and selection decision-making process.

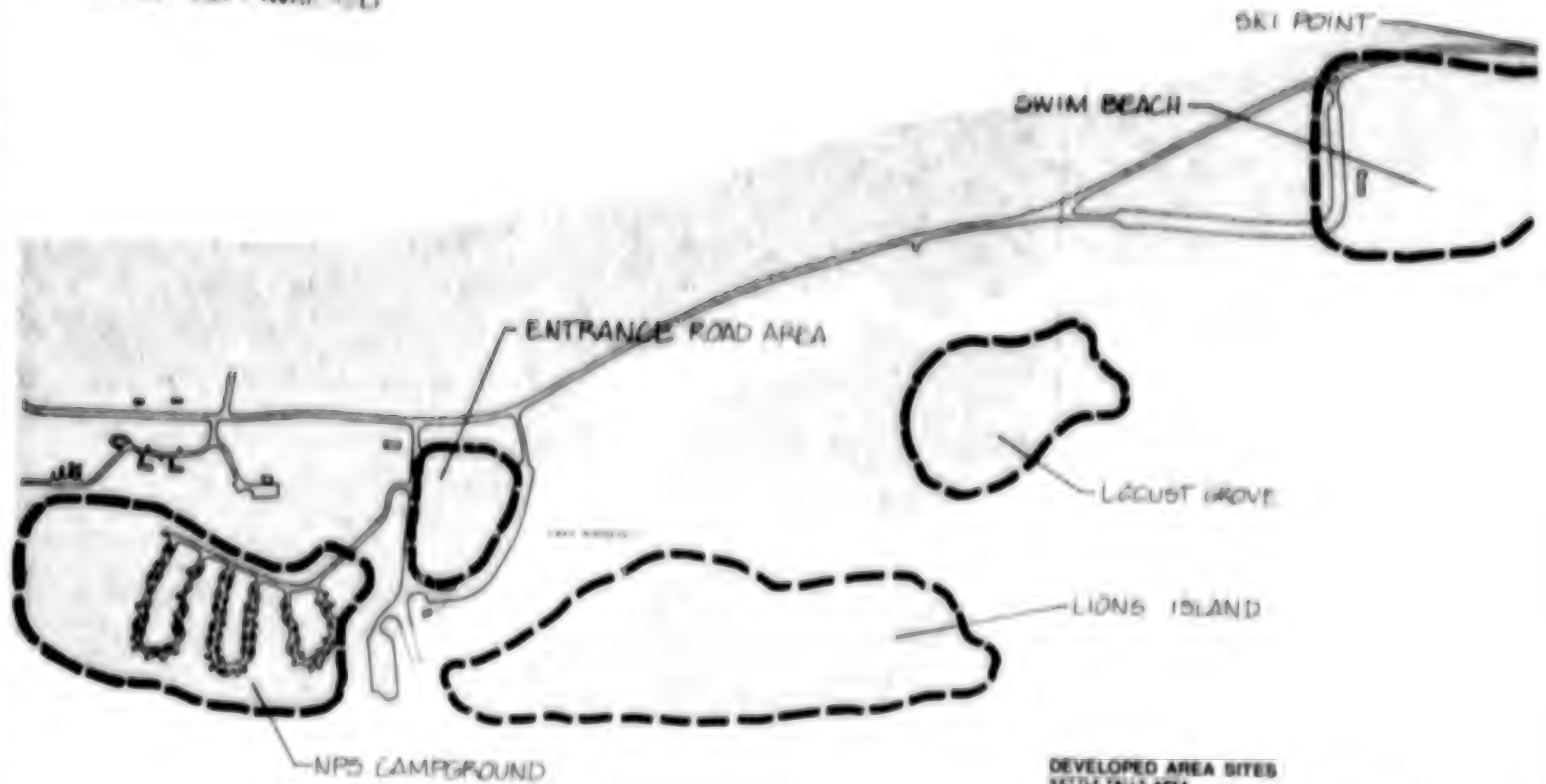
For the purpose of analysis, the Kettle Falls area was zoned into five sites --NPS Campground, Entrance Road area, Lions Island, Locust Grove, and Swim Beach/Ski Point, (see Developed Area Sites graphic). These five sites have site conditions and opportunities that would accommodate new developments and were included in the more detailed site inventory.

Existing roads, parking, and facility locations, vegetation patterns, general vegetation types, views, lake accessibility, known cultural resource areas (not specific sites), availability of water and electric utilities, and vehicular access are shown on the oversize site inventory graphic sheets (not included in report). Site conditions are shown in a matrix form. Site photographs for three sites evaluated for potential development are also included.

SITE INVENTORY MATRIX

SITE CONDITIONS	NPS CAMPGROUND	ENTRANCE ROAD AREA	LIONS ISLAND	LOCUST GROVE	SWIM BEACH SKI POINT
OPPORTUNITIES AND CONSTRAINTS					
1.1.1.1.1					
1.1.1.1.2					
1.1.1.1.3					
1.1.1.1.4					
1.1.1.1.5					
1.1.1.1.6					
1.1.1.1.7					
1.1.1.1.8					
1.1.1.1.9					
1.1.1.1.10					
1.1.1.1.11					
1.1.1.1.12					
1.1.1.1.13					
1.1.1.1.14					
1.1.1.1.15					
1.1.1.1.16					
1.1.1.1.17					
1.1.1.1.18					
1.1.1.1.19					
1.1.1.1.20					
1.1.1.1.21					
1.1.1.1.22					
1.1.1.1.23					
1.1.1.1.24					
1.1.1.1.25					
1.1.1.1.26					
1.1.1.1.27					
1.1.1.1.28					
1.1.1.1.29					
1.1.1.1.30					
1.1.1.1.31					
1.1.1.1.32					
1.1.1.1.33					
1.1.1.1.34					
1.1.1.1.35					
1.1.1.1.36					
1.1.1.1.37					
1.1.1.1.38					
1.1.1.1.39					
1.1.1.1.40					
1.1.1.1.41					
1.1.1.1.42					
1.1.1.1.43					
1.1.1.1.44					
1.1.1.1.45					
1.1.1.1.46					
1.1.1.1.47					
1.1.1.1.48					
1.1.1.1.49					
1.1.1.1.50					
1.1.1.1.51					
1.1.1.1.52					
1.1.1.1.53					
1.1.1.1.54					
1.1.1.1.55					
1.1.1.1.56					
1.1.1.1.57					
1.1.1.1.58					
1.1.1.1.59					
1.1.1.1.60					
1.1.1.1.61					
1.1.1.1.62					
1.1.1.1.63					
1.1.1.1.64					
1.1.1.1.65					
1.1.1.1.66					
1.1.1.1.67					
1.1.1.1.68					
1.1.1.1.69					
1.1.1.1.70					
1.1.1.1.71					
1.1.1.1.72					
1.1.1.1.73					
1.1.1.1.74					
1.1.1.1.75					
1.1.1.1.76					
1.1.1.1.77					
1.1.1.1.78					
1.1.1.1.79					
1.1.1.1.80					
1.1.1.1.81					
1.1.1.1.82					
1.1.1.1.83					
1.1.1.1.84					
1.1.1.1.85					
1.1.1.1.86					
1.1.1.1.87					
1.1.1.1.88					
1.1.1.1.89					
1.1.1.1.90					
1.1.1.1.91					
1.1.1.1.92					
1.1.1.1.93					
1.1.1.1.94					
1.1.1.1.95					
1.1.1.1.96					
1.1.1.1.97					
1.1.1.1.98					
1.1.1.1.99					
1.1.1.1.100					
1.1.1.1.101					
1.1.1.1.102					
1.1.1.1.103					
1.1.1.1.104					
1.1.1.1.105					
1.1.1.1.106					
1.1.1.1.107					
1.1.1.1.108					
1.1.1.1.109					
1.1.1.1.110					
1.1.1.1.111					
1.1.1.1.112					
1.1.1.1.113					
1.1.1.1.114					
1.1.1.1.115					
1.1.1.1.116					
1.1.1.1.117					
1.1.1.1.118					
1.1.1.1.119					
1.1.1.1.120					
1.1.1.1.121					
1.1.1.1.122					
1.1.1.1.123					
1.1.1.1.124					
1.1.1.1.125					
1.1.1.1.126					
1.1.1.1.127					
1.1.1.1.128					
1.1.1.1.129					
1.1.1.1.130					
1.1.1.1.131					
1.1.1.1.132					
1.1.1.1.133					
1.1.1.1.134					
1.1.1.1.135					
1.1.1.1.136					
1.1.1.1.137					
1.1.1.1.138					
1.1.1.1.139					
1.1.1.1.140					
1.1.1.1.141					
1.1.1.1.142					
1.1.1.1.143					
1.1.1.1.144					
1.1.1.1.145					
1.1.1.1.146					
1.1.1.1.147					
1.1.1.1.148					
1.1.1.1.149					
1.1.1.1.150					
1.1.1.1.151					
1.1.1.1.152					
1.1.1.1.153					
1.1.1.1.154					
1.1.1.1.155					
1.1.1.1.156					
1.1.1.1.157					
1.1.1.1.158					
1.1.1.1.159					
1.1.1.1.160					
1.1.1.1.161					
1.1.1.1.162					
1.1.1.1.163					
1.1.1.1.164					
1.1.1.1.165					
1.1.1.1.166					
1.1.1.1.167					
1.1.1.1.168					
1.1.1.1.169					
1.1.1.1.170					
1.1.1.1.171					
1.1.1.1.172					
1.1.1.1.173					
1.1.1.1.174					
1.1.1.1.175					
1.1.1.1.176					
1.1.1.1.177					
1.1.1.1.178					
1.1.1.1.179					
1.1.1.1.180					
1.1.1.1.181					
1.1.1.1.182					
1.1.1.1.183					
1.1.1.1.184					
1.1.1.1.185					
1.1.1.1.186					
1.1.1.1.187					
1.1.1.1.188					
1.1.1.1.189					
1.1.1.1.190					
1.1.1.1.191					
1.1.1.1.192					
1.1.1.1.193					
1.1.1.1.194					
1.1.1.1.195					
1.1.1.1.196					
1.1.1.1.197					
1.1.1.1.198					
1.1.1.1.199					
1.1.1.1.200					
1.1.1.1.201					
1.1.1.1.202					
1.1.1.1.203					
1.1.1.1.204					
1.1.1.1.205					
1.1.1.1.206					
1.1.1.1.207					
1.1.1.1.208					
1.1.1.1.209					
1.1.1.1.210					
1.1.1.1.211					
1.1.1.1.212					
1.1.1.1.213					
1.1.1.1.214					
1.1.1.1.215					
1.1.1.1.216					
1.1.1.1.217					
1.1.1.1.218					
1.1.1.1.219					
1.1.1.1.220					
1.1.1.1.221					
1.1.1.1.222					
1.1.1.1.223					
1.1.1.1.224					
1.1.1.1.225					
1.1.1.1.226					
1.1.1.1.227					
1.1.1.1.228					
1.1.1.1.229					
1.1.1.1.230					
1.1.1.1.231					
1.1.1.1.232					
1.1.1.1.233					
1.1.1.1.234					
1.1.1.1.235					
1.1.1.1.236					
1.1.1.1.237					
1.1.1.1.238					
1.1.1.1.239					
1.1.1.1.240					
1.1.1.1.241					
1.1.1.1.242					
1.1.1.1.243					
1.1.1.1.244					
1.1.1.1.245					
1.1.1.1.246					
1.1.1.1.247					
1.1.1.1.248					
1.1.1.1.249					
1.1.1.1.250					
1.1.1.1.251					
1.1.1.1.252					
1.1.1.1.253					
1.1.1.1.254					
1.1.1.1.255					
1.1.1.1.256					
1.1.1.1.257					
1.1.1.1.258					
1.1.1.1.259					
1.1.1.1.260					
1.1.1.1.261					
1.1.1.1.262					
1.1.1.1.263					
1.1.1.1.264					
1.1.1.1.265					
1.1.1.1.266					
1.1.1.1.267					
1.1.1.1.268					
1.1.1.1.269					
1.1.1.1.270					
1.1.1.1.271					
1.1.1.1.272					
1.1.1.1.273					
1.1.1.1.274					
1.1.1.1.275					
1.1.1.1.276					
1.1.1.1.277					
1.1.1.1.278					
1.1.1.1.279					
1.1.1.1.280					
1.1.1.1.281					
1.1.1.1.282					
1.1.1.1.283					
1.1.1.1.284					
1.1.1.1.285					
1.1.1.1.286					
1.1.1.1.287					
1.1.1.1.288					
1.1.1.1.289					
1.1.1.1.290					
1.1.1.1.291					
1.1.1.1.292					
1.1.1.1.293					

BEST COPY AVAILABLE



DEVELOPED AREA SITES
KETTLE FALLS AREA

UTAH STATE NATIONAL RECREATION AREA - WASHINGTON
COUNTY, IDAHO



BLANK PAGE

LIONS ISLAND



ISLAND INTERIOR LOOKING SOUTHEAST



SHORELINE LOOKING DOWN LAKE

CLARK FINE

LOCUST GROVE



SEASONAL WETLAND BETWEEN LOCUST GROVE AND MARINA



GROUP CAMPGROUND - OLD KETTLE FALLS TOWNSITE

PLATE 100



GROUP CAMPGROUND - OPEN SPACE

SWIM BEACH



CHANGING AREA BUILDINGS AND LAWN AREA

BLANK PAGE



ACTIVE PLAY AREA



SWIM BEACH AREA

1000

SKI POINT



LOOKING SOUTH TOWARDS SKI POINT OPEN SPACE FROM SWIM BEACH AREA



INTERIOR OF LOOP ROAD

THE PRINCE



LOOKING DOWN LAKE

W. J. P. 1991

SITE SUITABILITY ANALYSIS

As a first step to define the most suitable development sites, the development program was defined in terms of four major uses -- marina, day use/swim beach, RV and tent campground, and group campground (See the MAJOR TYPES OF DEVELOPMENT section). Next, site conditions inventory was conducted for NPS Campground, Entrance Road area, Lions Island, Locust Grove, and the Swim Beach/Ski Point.

For each of the development types, each of the five sites was ranked as to how their existing conditions compared to the desirable site consideration necessary to support a particular type of development. The results of the site suitability analysis are depicted on the following four matrices and the Site Suitability graphic.

Each of the three sites were assigned a numerical rating of either 0 = low, 1 = moderate; or 2 = high suitability based on the degree to which existing site conditions matched desired site considerations for the development. Some site considerations were weighted as more important and the numerical rating for those considerations were multiplied by a factor of 2. The numerical ratings for each site were then summed and a total score recorded on the matrix. The comparison of each site's score gives an indication of which site or sites are most suitable for the particular type of development.

Suitability Rating Legend

- 0 = low
- 1 = moderate
- 2 = high
- * = multiplier factor of 2 applies

MARINA SITE SUITABILITY

SITE CONDITIONS	NPS CAMPGROUND	ENTRANCE ROAD AREA	LIONS ISLAND	LOCUST GROVE	SWIM BEACH SKI POINT
1. Access to water	1	1	2	2	2
2. Deep water	1	1	2	2	2
3. Protected moorage	1	1	2	2	2
4. Low profile structures	1	1	2	2	2
5. Shallow water (10' to 20' max)	1	1	2	2	2
6. Little siltation	1	1	2	2	2
7. Little waves	1	1	2	2	2
8. Access to utilities	1	1	2	2	2
9. Access to 100' or more	1	1	2	2	2
TOTAL	9	9	20	16	16

GROUP CAMP SITE SUITABILITY

SITE CONDITIONS	NPS CAMPGROUND	ENTRANCE ROAD AREA	LIONS ISLAND	LOCUST GROVE	SWIM BEACH SKI POINT
Full topography	1	1	1	1	
Topography (at other site)	1	1	1	1	
Well drained soil	1	1	1	1	
Shading for shade	1	1	1	1	1
Proximity to water	1	1	1	1	1
Proximity to toilet	1	1	1	1	1
Proximity to water (distance)	1	1	1	1	1
Quantity of (all) species	1	1	1	1	1
TOTAL	8	8	8	8	4

NO-SERVICE RV/TENT CAMPGROUND SUITABILITY

SITE CONDITIONS	NPS CAMPGROUND	ENTRANCE ROAD AREA	LIONS ISLAND	LOCUST GROVE	SWIM BEACH SKI POINT
Full topography	1	1	1	1	1
Well drained soil	1	1	1	1	1
Shading for shade	1	1	1	1	1
Proximity to water (camping site)	1	1	1	1	1
Proximity to toilet	1	1	1	1	1
Proximity to water (distance)	1	1	1	1	1
Quantity of (all) species	1	1	1	1	1
TOTAL	8	8	8	8	8

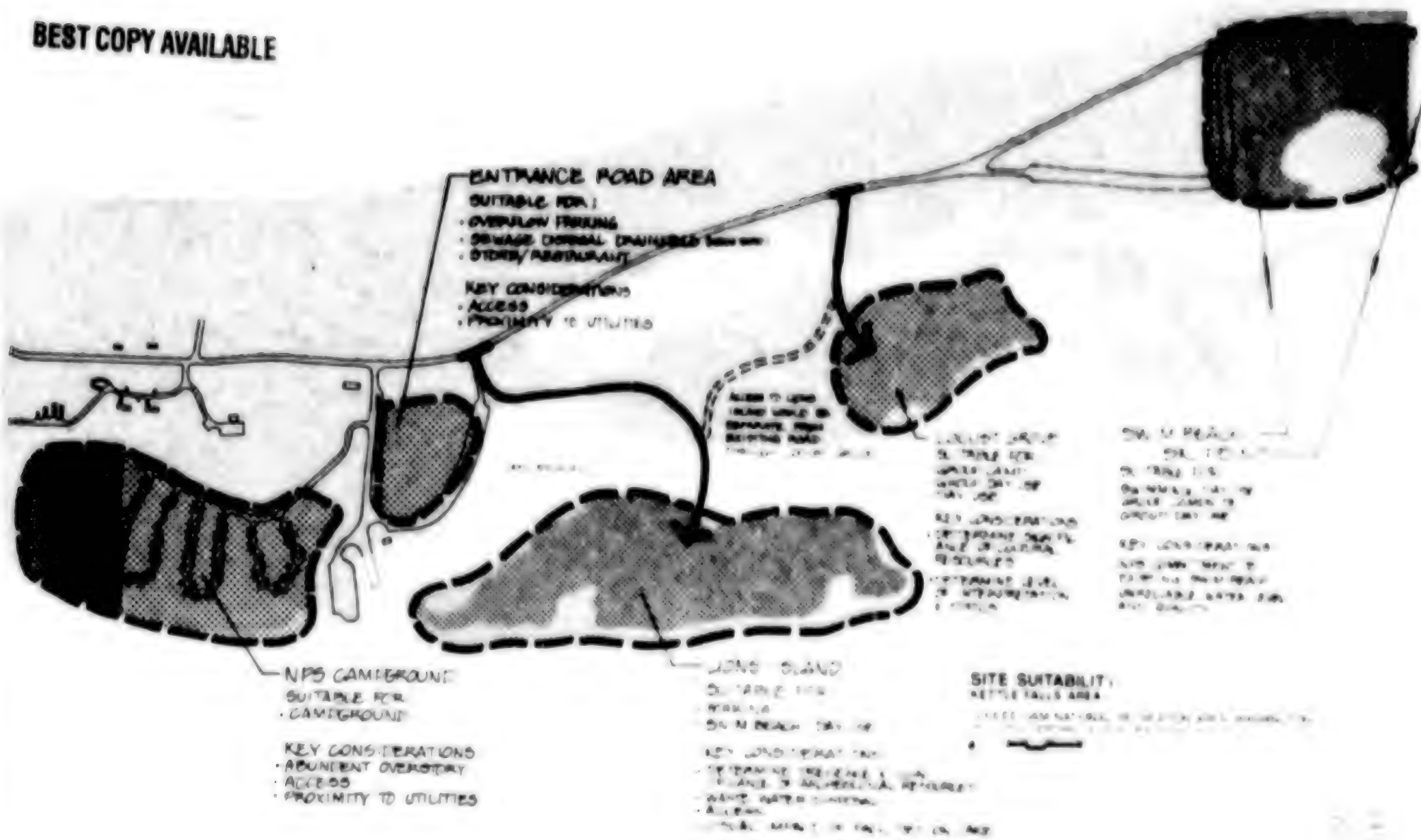
DAY USE/SWIM BEACH SUITABILITY

SITE CONDITIONS	NPS CAMPGROUND	ENTRANCE ROAD AREA	LIONS ISLAND	LOCUST GROVE	SWIM BEACH SKI POINT
Flat topography	4	4	4	4	4
Access to water	2	0	4	0	2
Location for shade	4	4	0	2	1
Proximity to parking, beach	2	3	1	3	4
Convenient water navigation	4	0	4	2	1
Water containing water	4	2	1	4	1
Available parking (2000-2500)	4	2	4	2	1
Flat open area	4	4	4	1	2
Distance of existing structures	2	2	4	3	7
Distance of T&E agencies	2	2	2	2	2
Open space for play	2	0	1	1	1
Proximity to roads	4	1	1	1	1
Shady area	2	1	1	4	1
TOTAL	18	9	20	16	20

Interpretation of the site suitability analysis reveals that there are two locations for all of the development types except the marina, which needs to be next to deep water. This provides some alternatives for locating developments (see Site Suitability graphic)

BLANK PAGE

BEST COPY AVAILABLE



THE END

POTENTIAL USE LOCATIONS AND RECOMMENDATIONS

With reference to facility development, the 1980 GMP stated that "expansion of existing concession facilities and services will be encouraged when economically feasible based on regional population growth. Development of concessions in new locations will be considered only when visitor demand is clearly indicated and environmental considerations are met." Specific GMP actions called for at Kettle Falls are as follows:

- Relocate group camping area from Locust Grove to southeast of swim beach area.
- Construct 1.5 mile interpretive trail from campground to swim beach through Locust Grove.
- Encourage concession-operated canoe rental and rental slip development.
- Upgrade playground.
- Construct new concession stand and gasoline dispensing area.
- Construct one new comfort station in new group camping area.

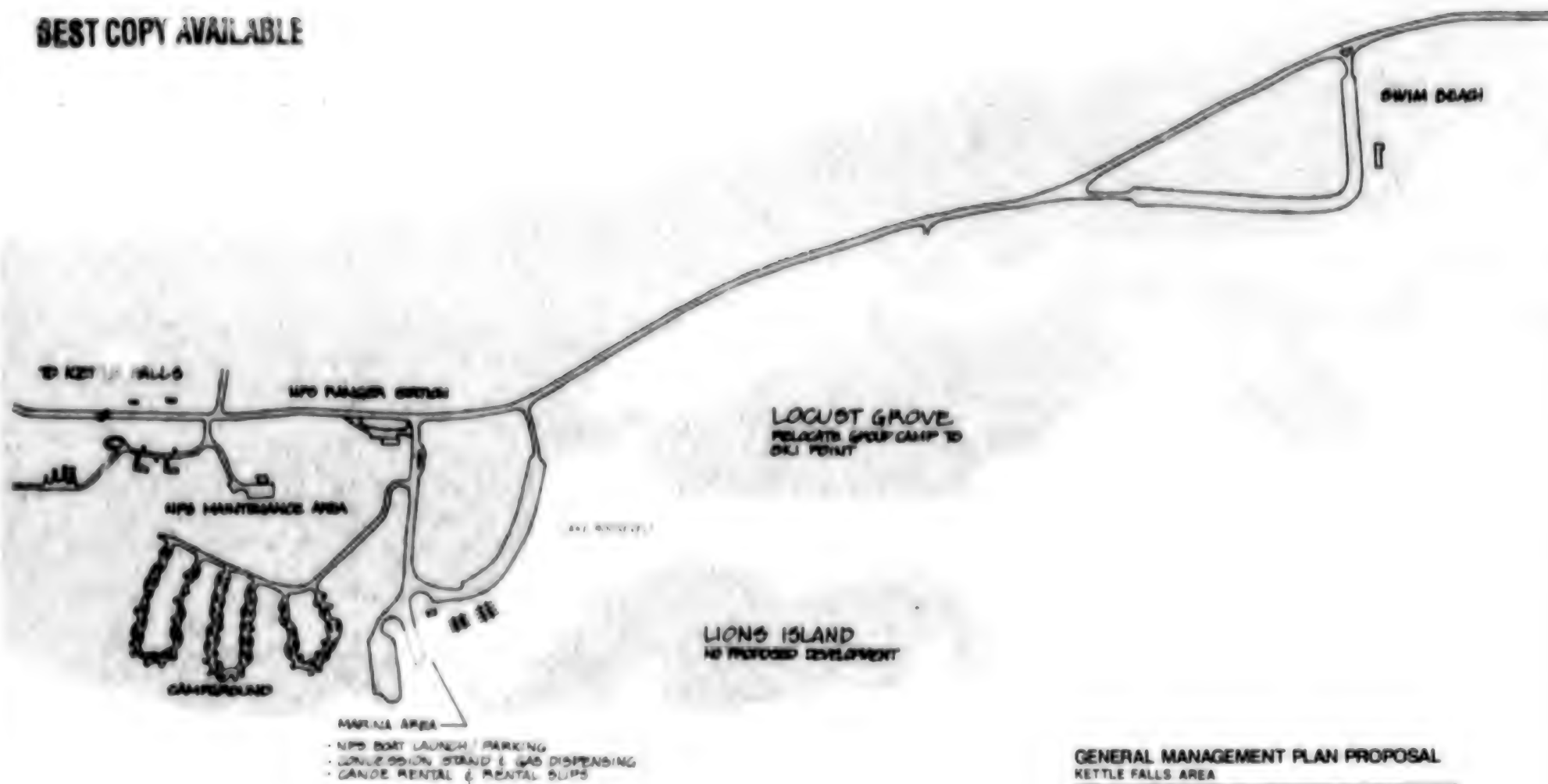
These proposals are shown on the GMP Proposals graphic. While they may have been the approved actions in 1980, they need to be reviewed in light of current issues -- concession proposals, uncertain significance of historical resources in Locust Grove, RV campground development on private property, and identification of significant archeological sites on Lions Island.

Based on discussions between park and regional management and DSC planners about alternative suitable site locations for development, a potential use concept was agreed upon (see Potential Use Locations graphic). The NPS Campground would be expanded as required for tent/RV camping without utility hookups. Support facilities such as overflow parking, sewage disposal drainfields (needs testing), or store/restaurant would be acceptable at the Entrance Road area. The marina would be expanded as required on the lake side of Lions Island by the concessioner. Locust Grove is suitable for day use or continuing the group campground activity. This would be re-evaluated once a determination is made on significance and National Register eligibility of cultural resources. The Swim Beach area would continue to be used as it is now. However, the Ski Point area would be converted to a reservation-only group day use area. Because of the undependable pool level and associated poor water quality at the existing Swim Beach area, the Colville Flats area is the preferred site for swimming.

While locations may function as discussed above, there are a series of recommendations that should be acted upon to confirm and direct concession development expansion and NPS development use of Locust Grove. These recommendations are as follows:

- Evaluate design proposal capacities with respect to design guidelines presented in the MAJOR TYPES OF DEVELOPMENT section.
- Determine eligibility of old Kettle Falls townsite resources for National Register of Historic Places, and survey site to determine whether any previously unrecorded cultural resources are present.
- Determine eligibility of Lions Island archeological sites for National Register of Historic Places.
- Determine suitability/feasibility of marina development along the unprotected lake shoreline of Lions Island by addressing wave height, wind fetch, hydrodynamics, etc.
- Require engineering, marketing, or visitor use studies prior to concession or NPS facility expansion.
- Evaluate the need for RV campground with full-service hookups.
- Determine feasibility of on-site sewage disposal.
- Complete environmental assessment/compliance prior to construction.
- Define interpretation opportunities and possible coordination with other interested groups and agencies.
- Complete an economic feasibility study or financial analysis of each proposed new concession operation before a prospectus is issued for a concession contract.

BEST COPY AVAILABLE



**GENERAL MANAGEMENT PLAN PROPOSAL
KETTLE FALLS AREA**

COULEE DAM NATIONAL RECREATION AREA WASHINGTON
UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE



BLANK

PAGE

BEST COPY AVAILABLE

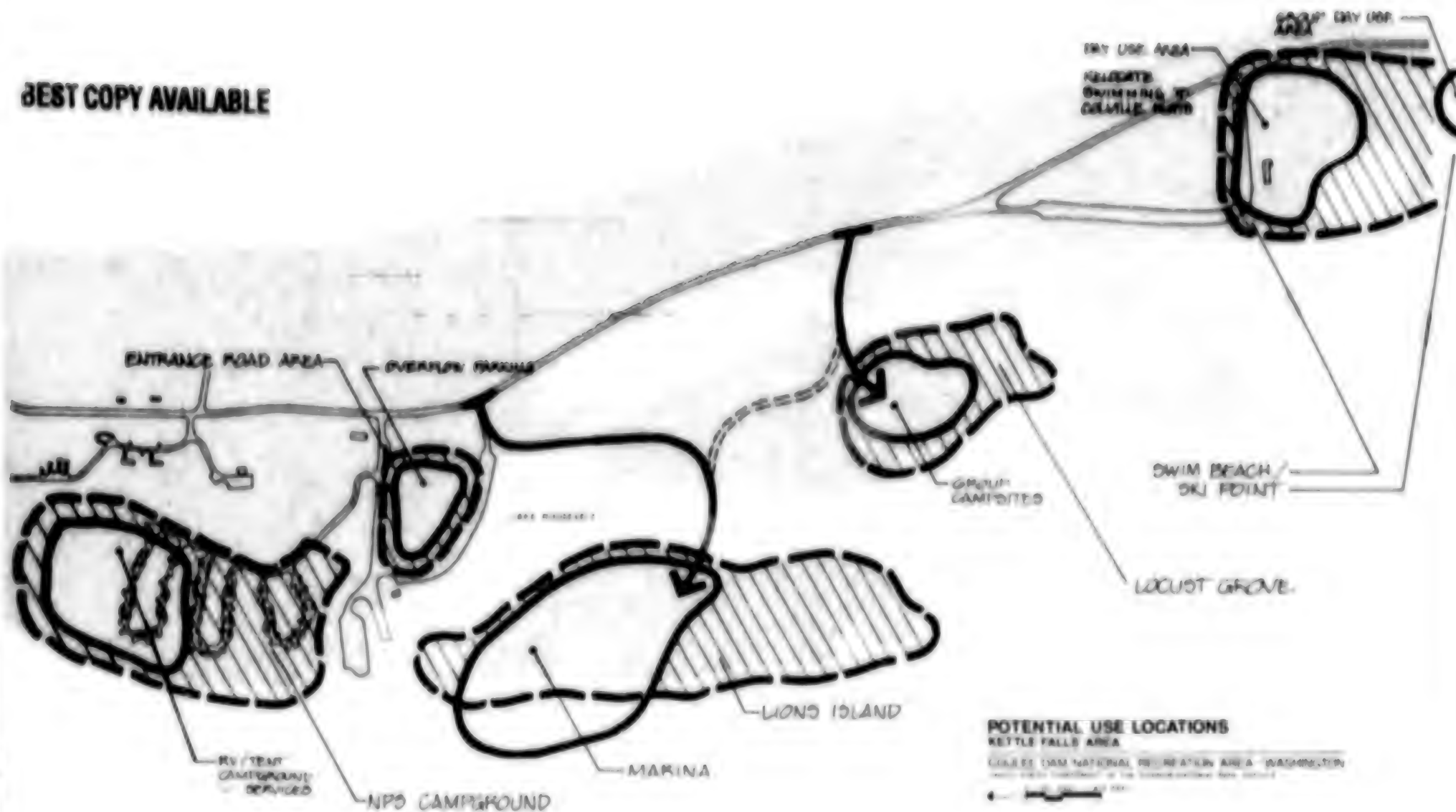


PLATE 103

COMPLIANCE

Consultation and coordination with other agencies and the public will occur when definitive site design proposals are initiated by the National Park Service or the concessioner. The intent of the worksession was to organize management directions, define site conditions and design guidelines, interpret site suitability for recreational uses, and identification of issues related to potential use of locations rather than development of site-specific proposals that require environmental compliance.

An environmental assessment will be required to address potential impacts (and mitigation) to floodplains/wetlands, threatened and endangered species, cultural resources, vegetation, wildlife, soils, air and water quality, and visitor use as a part of the comprehensive design phase and prior to construction.

There are no historic properties listed on the National Register of Historic Places within the NPS Campground, Entrance Road area, Lions Island, Locust Grove, or Swim Beach/Ski Point sites. However, the significance of known historic remains from the old Kettle Falls townsite exist in Locust Grove and the prehistoric archeological sites on Lions Island need to be determined. Prior to the completion of a final design, the site will be surveyed to determine whether any previously unrecorded cultural resources are present. Every effort will be made to avoid such resources should they exist. If it is not feasible to avoid cultural resources, mitigative measures will be developed in consultation with the State Historic Preservation Office.

Environmental compliance will be accomplished during the planning design phases of project development. All required clearances and permits will be cleared prior to any construction activity on site. It is suggested that environmental compliance for concession planned/designed/constructed projects be accomplished by the National Park Service. If the concessioner contracts the environmental compliance/clearance with a consulting firm or university, that work will be subject to NPS review and approval for content and format as per all applicable laws, regulations, policies, NPS-2 and NPS-12.

LIST OF PREPARERS

Gary Johnson, Section Chief, Denver Service Center
Nancy Arkin, Landscape Architect, Denver Service Center
Tom Lew, Civil Engineer, Denver Service Center
Aida Parkinson, Natural Resource Specialist, Denver Service Center

CONSULTANTS

Gary Kuiper, Superintendent, Coulee Dam NRA
John Scott, District Ranger, Coulee Dam NRA
Barney Weiss, Maintenance Mechanic Foreman, Coulee Dam NRA
Wauter Ketel, Park Ranger, Coulee Dam NRA
Gig Labret, Park Ranger, Coulee Dam NRA

Mike Tollefson, Associate Regional Director Operations, PNRO
Dan Nordgren, Chief OM, Pacific Northwest Regional Office
Geoffrey Swan, Landscape Architect, Pacific Northwest Regional Office



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interest of all our people. The stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U. S. administration.

Publication services were provided by the Denver Service Center
NPS D-67 Aug. 1989

N 95 / 19391

END

11-21-91